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The Saint Louis Program

At first glance the programs submitted by the sections and societies for the Saint Louis meeting of the Association appear to differ little from pre-war programs. Presidents and Vice Presidents will give retiring addresses; individual scientists will present the results of their researches; luncheons, dinners, and smokers will add a social element to scientific deliberations.

A more thorough appraisal of the programs, however, discloses trends that reflect the times and that may presage the future. The mathematicians invade the fields of engineering, business, and population. The physicists move into biology, and the meteorologists and astronomers annex radar as a research tool. The chemists put on a medical-pharmaceutical program, while the medicos enter industry.

The scientists in these several fields are not confused, nor are they under the illusion that the grass is greener in other pastures. On the contrary, they are carrying over from war experience the discovery that the departmentalization of science, fruitful as it may once have been in the development of principles, facts, and techniques, is now an impediment to progress along broader scientific fronts.

The war and war research scarcely feature at all in any program, yet there are few sessions in which the war-time effort of scientists does not enrich the scientific fare. Plainly the future is of greater moment than the past, and nowhere is this more evident than in the talk by Rear Admiral Bowen, who will present, not a *post mortem* of war-time activity, but rather the tremendous scope of navy research in the years ahead. Though sponsored by the Section on Physics this address will range the entire field of science.

Current problems are probed in several programs. Teachers are scrutinizing the training of science students; societies are examining science legislation; the biologists are pondering the advantages of a more dynamic union in the form of a Biological Institute.

Throughout the program as a whole there is an overtone of concern about science and human welfare. Several individual papers and whole programs, like that of Section N on "Medical Science and Industry," deal with specific social or economic problems; but the Section on the Social and Economic Sciences, with the collaboration of the Academy of World Economics, Pi Gamma Mu, and the Sections on Geology and Geography, and on Agriculture, plunge into the deep of "The Impact of Technology on Society." For three days thoughtful consideration will be given to the several facets of technology and its relation to human welfare and human relations.

At Saint Louis science evidently will overflow the test tube and spread, not by invitation but by its own newly released energy, across the artificial boundaries of scientific fields, into industry, education, international relations and human welfare. Scientists may not be experts outside their laboratories, and a few of these efforts may prove to be inexpert. But it is significant that scientists are venturing to shape the course of civilization. In the past they have contributed to its progress and have been blamed for its shortcomings. It is time they assisted society in assimilating and in using scientific tools with which man can rise to new heights, or perish as ignominiously as the dim-witted dinosaur.—H. A. M.

The Association Building Fund

How is the Association building fund coming along? That is generally the first question asked when a member of the office staff meets members of the Association in any other city than Washington. It is asked about ten times as often as any other question.

There are two apparently contradictory, but correct, answers to the question as it stands. One is that the building fund is not nearly so large as is desired—it is over $90,000, and increasing slowly. The other is that it is much larger than could be expected under the conditions that have existed.

Obviously some explanations are necessary to make the situation clear. It was planned to send out an invitation to each member of the Association toward the end of September for a contribution to a fund to provide a permanent home for the Association. The invitations were mailed a little later than had been planned, but in the meantime the atomic bombs had been dropped and the war had ended. At first there was great rejoicing and the public thought the old days were about to return. Government officials provided variety by somewhat frantically predicting that there would soon be large and rapidly increasing unemployment.

It is an interesting commentary on human foresight that all the expectations, predictions, and forecasts were entirely erroneous. The old days did not return and it now seems probable that they never will return. The official predictions of widespread involuntary unemployment and a new WPA did not materialize. The expectations of the administrative officers of the Association that they would presently be besieged by attractive and ambitious young women, desiring positions in offices of scientific societies, fell appreciably short of being realized. The vision of vacant office space that could be obtained almost for the asking turned out to be as disappointing.

After the close of the war restrictions on the office force the Association might employ were removed. They were removed also from all offices with the result that conditions were worse rather than better. Young women on the Association's office staff whose husbands or prospective husband were released from our armed forces promptly disappeared. For several months the office staff was seriously depleted. Under these conditions it was impossible to follow up the initial request for contributions to the Association's building fund. Although the members of the Association were also involved in the universal confusion that followed the close of the war, one letter to each member asking for contributions to the building fund secured more than $90,000.

After the St. Louis meeting it will be necessary to resume the drive for funds to provide a home for the Association. The need for reasonably contiguous office space is very acute in spite of the generous cooperation of the Smithsonian Institution in placing all its available space at the disposal of the Association. One room is on the second floor of a tower reached only by a narrow winding stone stairs. The accounting and membership records are on the third floor at the opposite side of the building. A small store room for supplies is on the fourth floor. *The Scientific Monthly* is edited in a small room on the eighth floor of the main tower; other employees are on the ninth floor. The editorial staff of *Science* and the advertising personnel are located six miles away in a "temporary building" which was built during World War I.

A few quotations from reports of contributions of medical students of New York University College of Medicine toward an Alumni Hall Auditorium to cost $500,000 will illustrate what happens when Young America goes to work: "Students of New York University College of Medicine have entered the Alumni Association's Campaign to raise funds to erect Alumni Hall Auditorium. . . . Seventy-five percent of the junior class, 70 percent of the seniors, 54 percent of the sophomores, and 25 percent of the freshmen have contributed. . . . Their $500,000 goal was oversubscribed by more than $50,000. . . . All this was accomplished without high pressure solicitation. Students were approached in class or in casual contacts and asked to subscribe and the entire campaign among students was conducted in a most informal manner."

O, for the irresistible enthusiasm and optimism of youth!

Honorary Junior Memberships in the Association

At the Ottawa, Canada, meeting of the Association in the summer of 1938, the Council passed a resolution offering to each affiliated academy of sciences the privilege of nominating each year one boy and one girl from its junior academy of science or from junior science clubs in its territory for a one-year Honorary Junior Membership in the Association. Each honorary junior member receives, without payment of dues, a certificate of membership, the *A.A.A.S. Bulletin*, *Science News Letter*, the programs and the reports of meetings of the Association. It is anticipated that, as soon as printing conditions become normal, each honorary junior member will receive also a subscription for *The Scientific Monthly*.

Twenty-two affiliated academies of science have been nominating boys and girls for honorary junior membership in the Association. There is plenty of evidence that the arrangement has been satisfactory to the academies and especially to the honorary junior members themselves; to the administrative officers of the Association it has been a revelation. The world of science of the juniors has changed within the generation even more than that of the older scientists, as great as the latter has been. If at times a fog of pessimism settles down over our chilled ambitions, it

will be blown away by the burning enthusiasm of the juniors. They are a tonic and a goad to greater efforts. To them spring is breaking and the world is beautiful.

There are great differences in the amount of attention the academies of science give to their junior academies and their junior science clubs. The Kentucky Academy, the Virginia Academy, and other academies are making notable contributions not only to the advancement of science but to our civilization by their work with their juniors. For example, the Kentucky Ornithological Society sponsors the *Junior Science Bulletin*, an eight-page journal now in its eleventh volume, which is published "for all affiliated science clubs." The academies of science which are not enthusiastically working with the juniors in their territories are missing much of value for themselves and are not meeting their responsibilities to the rising generation.

Probably much more work with the juniors is being done by the academies of science than is generally known. The subject is of such importance that the *Bulletin* earnestly invites the affiliated academies to submit for publication accounts of the work they are doing with and for their juniors. Such reports will be valuable for other academies and for the Association.

Since it has been hinted that perhaps some of the academies have not been fully meeting their responsibilities to their juniors, the question may be raised whether the Association has been meeting its responsibilities to junior scientists throughout the United States and Canada. The answer can be given in two letters, *n* and *o*. Of course, excuses can be made that there has been a war, that office space has been lacking, that the office staff has been inadequate, etc., but it must be admitted that the real reason has been lack of imagination and initiative.

It should not be necessary for the Association to learn from Hitler that the best way to transform the attitudes of a people is through their youths. Naturally scientists will not wish the boys and girls of America to shout *Heil!* to any man or to be servile to any organization. But recognizing their youthful enthusiasm and love of adventure, academies of science and the Association will encourage their attempts to explore all the boundless horizons of science. The problem is to do it in such a way as best to serve not only science but our common humanity. Probably, broadly considered, the two objectives are essentially the same. At any rate, now is a good time for discussion, for cooperative action should not long be delayed.—F. R. M.

Science and Sentimentalism

By nature and by training scientists are poor lobbyists. The labor unions, industrial organizations, and societies for the promotion of this and that have representatives in Washington to "watch" the legislative situation; but not the scientific organizations. Labor, industry, and pressure groups get representatives into state capitals at critical times to "inform" state legislators of "the facts," but not scientists, who usually have little else but facts.

In one way, this situation is as it should be. Science seeks little that legislation can provide. It has no "special interests." But the attitude of legislative detachment leaves scientists defenseless against cranks and sentimentalists who seek to promote anti-science legislation. And like the poor, the cranks and sentimentalists are always with us. Not many years ago they made a drive to pass laws against the teaching of evolution. Now they are striving to pass anti-vivisection laws. These people rarely hamper themselves with the truth, but they are adept at appeals to the emotions. And in a few legislatures, the record suggests that the heart is more susceptible than the head.

On January 3, 1945, William Lemke of North Dakota introduced H.R. 491 making it a "misdemeanor for any person to experiment or operate in any manner whatsoever upon any living dog, for any purpose other than the healing or curing of said dog, in the District of Columbia."

Anti-vivisection bills are also pending in the legislatures of Massachusetts and Maryland. In 1945 an anti-vivisection bill passed the New York State Senate by a vote of 39 to 9, but early in 1946 it was withdrawn; a similar bill failed of passage in Massachusetts by a single vote. The Legislative Committee of the Baltimore City Council threw out an anti-vivisection bill—but less on the testimony of the doctors from Johns Hopkins than on the living—and sentimental—testimony of two children, restored to health from certain death by successful repetition of an operation which had first been tried experimentally on dogs, and with no ill-effects to the dogs.

More than 100,000 people signed the petition for anti-vivisection legislation in New York. Only a few doctors, representing the American Medical Association, appeared against it, and their testimony weighed lightly upon the members of the State Senate. The doctors had the facts, but facts could not compete with the sentimentalism of 100,000 voters.

In a manuscript which has recently come to

this office, and which, it is hoped, will soon find its way into print, an eminent scientist, in defense of vivisection, berates the misinformed sentimentalists who place higher values on the loyalty of dogs to man than upon the more humane service dogs have rendered man through medical and surgical experimentation. He also berates the law-makers who fail to discriminate between sentimental attachment and true service. When one reads the vague and uninformed statement of William Lemke, made in support of his own bill at the hearings on February 28, he will feel that any rebuke, however strong, is well deserved.

But does the entire blame rest upon the sentimentalists and upon susceptible legislators? Have doctors informed their patients of their debt to dogs and other animals that have been martyrs to the cause of human health and welfare? It is probable that a substantial fraction of the 100,000 petitioners in New York have been, unwittingly, direct beneficiaries of vivisection; but without being told, how are they to know? It is not enough for a group of doctors to testify against anti-vivisection legislation, for public sentiment is mightier than prosaic medical facts. And public sentiment, in this instance, can be developed only if physicians and surgeons become more articulate with their many patients and make them more fully aware of their debt to the animals which have so greatly advanced surgery and medicine.

This is not an indictment of the medical profession. On the contrary, there is no evidence that men in other scientific fields have given the medical profession much, if any, assistance in the perennial fight against anti-vivisection. This is not a private fight between the medical profession and the cranks. It is, indeed, a fight for truth, a fight for freedom of investigation, and, in a sense, a fight for humanity, in which all scientists should be involved.

It must be obvious that legislative restriction in one field of scientific research can too readily be followed by restrictions in other fields. Laws that forbid any competent person to experiment or to operate "in any manner whatsoever upon any living dog" can readily be extended to every other kind of animal. Such laws will make it easier to forbid research on atomic energy or to make it unlawful to teach evolution or to teach other facts about inheritance and racial development. Any arbitrary restriction upon the direction or manner of research by competent scientists is a serious infringement upon the freedom of research, and upon the principles which support democracy. Such restrictions, in the long run, will prove as serious as interference with the freedom of the press, or with the freedom of religion. They are the concern of every scientist, and not of a single group which is most directly affected by specific legislation.

Americans have just learned the hard way that democracy can be preserved only by constant vigilance. Theoretically, scientists as men of learning should absorb the lesson from the experiences of others rather than experiences of their own. The preservation of freedom in research calls for constant vigilance and much more public education. And it may profitably be remembered that the lay public can more readily be reached through the heart than through the head. The most convincing argument for vivisection has not yet been stated: Scientists love dogs, too. However, some of them love dogs as benefactors to mankind rather than as sops to man's vanity.—H. A. M.

Section P

In the alphabetical sequence employed to tag the several sections of the Association, the letter P has been reserved for Industrial Science. For many years industrial science has flourished, but Section P has remained a letter without a section. It seems appropriate to inquire whether the fiction should continue, or whether it may appropriately be translated into fact.

The obstacles to the organization of such a section are obvious, but not necessarily insuperable. There is no such person as an "industrial scientist." There are chemists, geologists, mycologists, entomologists, and so on and on; and some of these people readily admit their industrial affiliation by calling themselves cereal chemists, or oil geologists. But what has a cereal chemist in common with an oil geologist? In brief, it is the application of a specialty that places a scientist in industry, and his loyalty is inevitably to his specialty.

Of less significance is the historical fact that the sections of the Association have commonly been the springboard from which individual societies have plunged into independent existence—for example, the American Chemical Society in 1876, the Geological Society of America in 1888, the American Society of Zoologists in 1890, the American Psychological Association in 1892. It would be unique for men with such diversified interests as are found in the industrial applications of science to seek out an organization and

to use it for the exploration of common problems. To most scientists in industry, trade associations seem entirely adequate.

It is not difficult to make a good case for an organization in which broad problems can be considered. On the scientific level, the A. A. A. S.–Gibson Island Conferences have demonstrated some of the things that can be done. Many discoveries in one field have made their way into other fields slowly, and industrial progress has been retarded because there has been no ready interchange of news and views among the several divergent areas of research. True, it takes a genius to evolve a conference or a meeting where such interchanges can be made, but the program of the Ninth A. A. A. S.–Gibson Island Conference as published in the March 1 issue of *Science* suggests what can be done.

There are, however, mutual problems of other kinds which can profitably be explored. The relationship between industries and universities is a complicated one which might profit from analytical study and discussion. There is no question that industry and the universities can be far more serviceable to each other by co-ordination of projects and personnel. If the Government enters the field of scientific research through the medium of a National Science Foundation, further co-ordination will be imperative, if only to eliminate needless duplication of effort. The training of scientists who can perceive and think beyond the confines of a narrow specialty is another problem which still demands—and will always require—further study.

Many of these thoughts and others besides have been expressed in letters which have come to the Association following the reports on the survey of industrial laboratories in the September and November issues of the BULLETIN. One letter, from the director of a large laboratory, deserves quotation:

> "More emphasis could be placed on the cooperation between research in industry and universities. The contacts between research men in industry and professors in the universities are helpful to both groups. It is the only way by which the university professor in experimental science can keep up-to-date with the progress of the science. When information becomes available to the university in book form, it is already out-of-date, and a professor has a better chance to provide his students with up-to-date information when he is privileged to have industrial contacts than when he isn't. On the other hand, the research men in industry are benefited by the contacts in keeping alive their interest in the fundamental data underlying their problems.
>
> "The industrial research laboratories are doing much fundamental work, the results of which are being made public and will enrich scientific thought in all fields. The organization of work in these laboratories makes it possible to get the cooperation of teams of men with different training, and I feel that this type of teamwork in research could be employed by university laboratories to good advantage. There are few problems in experimental science that do not call for varied types of training and experience. If we can get the cooperation of chemists, biologists and physicists on a problem in the field of biochemistry, for example, there is a better chance of solving it than if any one of these groups undertakes the investigation alone.
>
> "Industrial research is vitally interested in the training of men for research. Undoubtedly there is need for a better understanding of what industrial research requires in such training. It is my candid opinion that too much emphasis has been placed upon the utilitarian idea of education. We would have chemists capable of rendering better service if their undergraduate training involved more of humanities and less of science.
>
> "We need men in industrial research who are capable of understanding and interpreting the facts they observe, and this calls for more than chemistry and physics and mathematics."

Here, surely, is a case for a Section on Industrial Science, and it may be asked, "What are we waiting for?"

We are waiting for only one thing—leadership. The Permanent Secretary's Office can reserve the structure for a Section on Industrial Science, but it can not create the tenants to occupy the structure. There must be a conviction among scientists in industry that such an organization is needed; there must be initiative in creating it; there must be energy and imagination and some spontaneity in bringing it to life and keeping it not merely alive but living.

If scientists in industry believe that such an organization will serve industry and science, let's go. The Permanent Secretary's Office will be glad to implement any sound program of organization proposed by industrial scientists. Let us have a Section instead of a letter.—H. A. M.

Scientists and International Relations

The adoption of a constitution for the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the purposes of the organization, as set forth in the constitution, suggest consideration of the possible future role of scientists in international relations.

Prior to World War I scientists had little direct influence on international affairs, primarily because they were interested in exploring the universe rather than in developing means for national defense or products of importance in international commerce. At their meetings they discussed what was known as pure science and largely ignored its technological applications as not being worthy of their serious attention. The

lack of direct influence scientists had in governmental and international affairs is illustrated by the attitude of our Government toward the National Academy of Sciences. Although the Academy was established by an Act of Congress in 1863 for the specific purpose of advising the Government on scientific matters, rarely until 1915 did any department of the Government call upon it for investigations or advice. But during the years 1914–1918 the Government learned that science is of the highest importance for military purposes. In that period the National Research Council was established by an executive order of President Wilson, and it was continued in existence after the close of the war for purposes of peace. The following decade was one in which science and its applications almost promised Utopian conditions on the earth.

In the interval between the world wars, and even earlier to a lesser extent, scientists presented an almost perfect example of international harmony and good will. They freely exchanged scientific information by correspondence, publications, and personal visits. They organized international unions in various fields and held great international congresses. Presumably these organizations and congresses will be continued, but possibly not entirely in the previous atmosphere of good fellowship. The wounds of war produced by applications of science are too grievous to be soon forgotten, and the threat of even greater destruction from atomic bombs hangs menacingly over the world.

The Charter of the United Nations Organization adopted at San Francisco last year provided for establishing such specialized agencies as UNESCO, which was organized at London last November. As finally set up, it includes science in the scope of its interests. Presumably some, perhaps many, international relationships among scientists will be organized under UNESCO, if for no other reason than that finances and most of the necessary operating machinery will be provided by it. If this possibility should lead to complacency on the part of scientists and dependence on governmental support, the traditional independence of science would be endangered.

In his letter of transmittal to the Secretary of State of the Report of the Chairman of the United States Delegation to the London Conference, Mr. William Benton, Assistant Secretary of State, gave the following solemn warning:

> I share the hopes of UNESCO expressed by the Chairman and members of the United States Delegation who represented our nation and our people so ably at the London Conference. But I would couple with their words of hope a serious warning that the many groups throughout the country interested in UNESCO do not overestimate what has been accomplished. UNESCO has a Constitution. It has a Preparatory Commission. It has behind it the accumulated experience and zeal of those who have worked in this field for a generation. But UNESCO is still only a document, only a piece of paper. To use a figure which I owe to Mr. MacLeish, it is like a kite lying on the ground. It has yet to rise. It needs a strong wind behind it.
>
> UNESCO can become a dynamic force—only if it is given the world's best intellectual, moral, and political leadership; only if it is accorded adequate financial support; and only if it is granted time to grow. Years of devoted service by the ablest, the best-trained and most energetic men and women will be needed to realize its full potentialities.

Those words of wisdom should not be lost on scientists. There is hope in the new general organization, but it would be most unfortunate if the independent international relations that scientists have established on their own initiative and maintained by their own good will were permitted to languish. Organizations as well as organisms that are born and grow under adverse conditions are hardiest and most likely to endure.

From the point of view of attaining thorough understanding between peoples separated by differences in language and customs or even by distance, both the international meetings scientists have heretofore held and presumably also those that will be held under the auspices of UNESCO have serious weaknesses: the conferences in each field are separated by intervals of several years and they reach directly relatively few persons. Experience has proved that repeated and frequent contacts are necessary for the growth of mutual respect and understanding. The simplest and most feasible method of maintaining approximations to contacts between scientists is clearly through serial publications which not only present reports on scientific research but contain discussions and notes on current scientific events and about persons. Fortunately there are several such scientific journals in the world; for example, in England, India, Russia, and France, and, in the United States, the Association's weekly *Science*. Although *Science*, currently in its 103d volume, has served American scientists long and well, new opportunities are now opening to it, the one of special interest in the present connection being that of carrying announcements of American scientific research and news about American science and scientists throughout the world. No other means could accomplish so much at so little cost.

At the outbreak of the recent world war the membership roll of the Association carried the

names of scientists in 75 foreign countries. Probably the membership will be as widely distributed in the future. In any case, it is expected that the Association will make its journals available, by subscriptions, by exchanges, and otherwise wherever science flourishes. This will be done not only as a contribution to the advancement of science but also to promote international understanding and good will among scientists, on whom rests heavily the whole future of civilization.—F. R. M.

Support for UNESCO

At its January meeting the Council of the American Academy of Arts and Sciences, the second oldest learned society in the United States, adopted the following resolution:

Believing that the peace of the world and the advancement of the arts, the sciences, and education of all countries can be effectively furthered by an active support of the United Nations Educational, Scientific and Cultural Organization, the Council of the American Academy of Arts and Sciences congratulates the Senate and House of Representatives of the Congress of the United States upon the several resolutions adopted by them favoring support of this organization, and urges upon the Congress the desirability of ratifying the charter of the organization on the basis of the signature of our representatives at the London Conference last November.

In order that the widest support may be given to the United Nations Educational, Scientific and Cultural Organization, the Council desires that copies of this resolution shall be sent to all the learned and scientific bodies throughout the world with which it has communication, to the public press, to the President of the United States, the Secretary of State, the Speaker of the House, the President of the Senate, and to the Assistant Secretaries of State.

War Destruction of Books in England

In the December, 1944, issue of the BULLETIN there appeared an account of the destruction of the book center of Leipzig by bombing. In twenty-five minutes 1,500 tons of bombs were dropped on the heart of the book-making industry in Germany with devastating effects.

England, also, lost books and libraries from bombing and burning, as did many other countries in the war-blighted areas of Europe. The British Library Association has made a survey for England, finding that public and university libraries lost a total of nearly 1,150,000 books. The greatest losses were in city libraries, because there were the largest numbers of books, and naturally the centers of population were the principal objects of attack. With the losses of books there were also destructions of works of art and of schools and churches and of historic structures. Nothing is so sacred or carries so many reminders of human nobility as to be immune from the destruction of war.

Coventry, the worst-bombed city in England, a community of 213,000 people, lost 150,000 books, and 213,000 were destroyed in Liverpool. The library of King's College suffered the loss of 7,000 books, and Birbeck College, 35,000. In these institution there were rare volumes and manuscripts, some of which it may not be possible to replace.

Happily the war has ended. The bombed buildings in time will be replaced, and the shelves of libraries again will be filled with books, for science has increased human ability to create physical things as well as to destroy them. But it remains to be seen whether science can restore the lost, or perhaps only temporarily eclipsed, fine things of the mind, the desire to give without thought of receiving, pleasure in charity, natural benevolence, and universal philanthropy, in the fundamental meaning of the word. There is nothing more touching in human lives than the selfless and passionate love with which a mother looks on her helpless infant. Through wars and pestilence and famine, during countless generations, that love has saved the human race from extinction. Now, in a world of dissentions and power politics, in which millions of lives have been expended for dominion over physical things, may scientists look with similar compassion and solicitude on the higher possibilities of this frail human family as the foremost thing they should cherish and nourish.—F. R. M.

The American Psychological Association

The American Psychological Association has recently completed a thorough-going reorganization. The governing structure has been changed materially from that described in the October, 1943 *AAAS Bulletin*. In reorganizing, the American Association for Applied Psychology, which was described in the November, 1945 *AAAS Bulletin*, has become part of the APA.

When the APA was founded in 1892, its stated object was to advance psychology as a science. The new constitution recognizes additional obligations of the Association in stating: "The object of the American Psychological Association shall be to advance psychology as a science, as a profession, and as a means of promoting human welfare." By its reorganization the Association seeks not only to realize its scientific aims but also to fulfill its obligations to members of the profession and to society as a whole.

No other professional or scientific body served as the exact model for the reorganization. There are features copied from other scientific bodies, and features copied from the former APA and AAAP.

Voting members of the organization are of two classes, Fellows and Associates. Fellows are persons who hold the Doctor's degree based in part upon a psychological dissertation and who, in addition, have either published

acceptable research beyond the doctorate, or have four years or more of acceptable professional experience beyond that degree. Associates are persons who have completed at least two years of graduate training in psychology or one year of graduate training and one of professional experience, and who are devoting full time to psychological work.

In addition to the members, provision is made for a group of student Affiliates.

The structure of the reorganized APA is different from the old pattern in that interest differences have been recognized by the creation of separate divisions. Each member must belong to at least one division and may belong to several. Some divisions bring together those with common research interests, such as Physiological Psychologists and Child Psychologists; others represent differences primarily based on type of employment, such as School Psychologists, Industrial Psychologists, or Psychologists in Public Service. At present there are eighteen divisions, but some of these may combine with others, divisions may be abolished, and new ones may be created as desired by the members.

Since the individual divisions in some cases border on the interests of non-psychologists, provision has been made for Divisional Affiliates—persons who are interested in a particular field and who desire association with the psychologists in that field, but who are not themselves psychologists. For example, a physiologist interested in studies of behavior could became a member of the Division of Physiological and Comparative Psychology, with the title, in regard to APA of Divisional Affiliate.

On matters pertaining to a particular field of interest, the appropriate division has considerable autonomy.

Problems relating to psychology as a whole are under the control of the Council of Representatives, the governing body of the Association. It consists of representatives from each division and nine regional representatives from nine geographic areas. A board of Directors, composed of the four officers of the Association and six members of the Council, acts as administrative agent of the Council and exercises supervision over the affairs of the Association. Special and standing committees carry on specific tasks, and the desire to keep the organization responsive to changing needs has led to the formation of a Policy and Planning Board.

The officers of the Association are: Henry E. Garrett, President; Carl R. Rogers, President-Elect; Donald G. Marquis, Recording Secretary; and Willard L. Valentine, Treasurer. The six elected Board members for 1946 are Robert R. Sears, Carroll L. Shartle, William A. Hunt, Edward C. Tolman, John F. Dashiell, and Richard M. Elliott.

The APA established in January, 1946, a central office in Washington, D. C., under the direction of an Executive Secretary. The functions of the office include administrative detail, a placement and information service for psychologists, and the business management of publications.

The APA publishes ten journals: *Psychological Review, Psychological Bulletin, Journal of Experimental Psychology, Psychological Abstracts, Psychological Monographs, Journal of Abnormal and Social Psychology, Journal of Applied Psychology, Journal of Counseling Psychology, Applied Psychology Monographs,* and *The American Psychologist.* *The American Psychologist* is new, with a first issue appearing in January, 1946. It will serve as the "house organ" of the APA.—DAEL WOLFLE, *Executive Secretary.*

Membership in the Association

Eligibility for Membership

Membership in the Association is open to all persons engaged in scientific work, whether in the fields of the natural or the social sciences; to all amateur scientists, whatever their special interests; and to all who desire to follow the advances of science and its effects upon civilization. Members having made substantial contributions to the advancement of science are eligible for election as fellows.

Dues and Publications

Membership dues are $5 per year, including subscriptions for the monthly A.A.A.S. BULLETIN and either the weekly journal *Science,* now in its 103d volume, or *The Scientific Monthly,* now in its 62d volume. *Science* is a journal for professional scientists; the *Monthly* is a nontechnical journal for the intelligent public. The Association also publishes technical symposia and nontechnical books on science that are available for members at prices substantially below those to the public.

Organization and Meetings

The Association was founded in 1848, with an initial membership of 461. Papers in its early programs were classified as either natural philosophy or natural history. Now its work is organized under 16 sections and 190 associated societies having a total membership of over 500,000. Its annual meetings are the greatest regular gatherings of scientists in the world.

Nominations and Applications for Membership

Members may submit nominations for membership at any time, and persons desiring to become members can obtain membership application forms from the Office of the Permanent Secretary, the Smithsonian Institution Building, Washington 25, D. C.

Changes of Address

New addresses for the Association's record and for mailing the journals *Science* and *The Scientific Monthly,* as well as the A.A.A.S. BULLETIN, should be in the Office of the Permanent Secretary, Washington 25, D. C., at least two weeks in advance of the date when the change is to become effective.

Officers of the Association

President, James B. Conant; *Permanent Secretary,* F. R. Moulton; *General Secretary,* Otis W. Caldwell; *Treasurer,* W. E. Wrather.

Executive Committee: Anton J. Carlson, *Chairman;* Otis W. Caldwell, Arthur H. Compton, James B. Conant, Charles F. Kettering, Burton E. Livingston, Kirtley F. Mather, Walter R. Miles, F. R. Moulton, Fernandus Payne, and Elvin C. Stakman.